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[0004] Immediately after dilation of the blood vessel and to ensure a relatively smooth inside wall surface for the vessel and to be able to avoid renewed stenosis, stents were developed. Those small tubes serve inter alia in conjunction with PCTA to maintain the vessel flow cross-section which is produced by balloon angioplasty, in order thereby to ensure long-term success with the PCTA procedure.

[0018] An embodiment by way of example of the present invention will now be described with reference to the figures, in which:

Figure 1 shows a perspective view of a first embodiment of the present invention; and

Figure 2 shows a perspective view of a second embodiment of the present invention.

[0019] Figure 1 shows a portion 1 of a stent according to the invention. The portion 1 comprises a piece of wire 2 of the structure of the stent.

[0022] In Figs. 1 and 2, the coating 6 is applied to the surface 4 of the wire 2 in different densities in accordance with the differing stretching of the regions 8 through 16. That differing density is achieved in that the individual coating islands 18 of the coating 6, which are each of a circular configuration, are arranged at differing spacings relative to each other on the surface 4. Thus, those coating islands 18 of substantially equal size are arranged at a first spacing relative to each other in the regions 8 and 10, while in the regions 12 and 14 they are arranged at a second, greater spacing relative to each other and in the region 16 they are arranged at a third, still greater spacing relative to each other. In that way the coating 16 can also go with the varying degree of stretching of the surface 4, without the coating 6 or the coating islands 18 suffering from spalling from the surface 4 of the wire 2 of the stent upon stretching thereof.

[0023] Figure 2 shows a portion 1 of a stent according to the invention. The portion 1 comprises a piece of wire 2 of the structure of the stent. The wire 2 is of a cylindrical configuration and has a surface 4. Disposed on the surface 4 is a coating 6 which is arranged in a grid-like or patterned configuration. The wire 2 is incorporated into a stent structure in such a

way that, upon stretching (not shown) of the stent, different degrees of local stretching of the wire 2 occur. Thus, the regions 8 and 10 of the wire 2, which are illustrated in Figure 2, are stretched only to a slight degree. The regions 12 and 14 of the wire 2 are stretched to a greater degree in comparison, when the stent is stretched overall. The region 16 of the wire 2 is stretched to the greatest degree when the stent is stretched. The coating 6 is applied to the surface 4 of the wire 2 yielding coating islands of different size in accordance with the differing stretching of the regions 8 through 16. The individual coating islands 18 of the coating 6, which are each of a circular configuration, are arranged at differing spacings relative to each other on the surface 4. Thus, those coating islands 18 of substantially larger size are arranged at a first spacing relative to each other in the regions 8 and 10. In regions 12 and 14 the coating islands 18, which are smaller in size when compared to those in regions 8 and 10, are arranged at a second, greater spacing relative to each other. Lastly, in the region 16 the coating islands 18, which are the smallest in size when compared to the other coating islands 18 of the other regions, are arranged at a third, still greater spacing relative to each other. In that way the coating 16 can also go with the varying degree of stretching of the surface 4, without the coating 6 or the coating islands 18 suffering from spalling from the surface 4 of the wire 2 of the stent upon stretching thereof.